

## **Habitat assessment from airborne and space-based remote sensing**

**Code:** 19/21

**Company:** 2Excel Geo

**Location:** Sywell Aerodrome, Wellingborough Road, Sywell, Northamptonshire, NN6 0BN

### **Company Description:**

2Excel Geo operate the only commercial hyperspectral airborne capability in the UK. Our airborne platform is equipped with scientific-grade hyperspectral and photogrammetric cameras able to collect imagery over large areas at high spatial and spectral resolution. In addition, the team also integrate remotely sensed data with machine learning and computer vision techniques to solve difficult environmental problems. The team also conducts field survey and ground validation work using a range of techniques including field spectroscopy. Previous work has covered a range of disciplines including agriculture, forestry and landscape management.

### **Project Description:**

The SPIN project will be centred around the mapping of habitat from both airborne hyperspectral and space-borne multispectral datasets. In addition, it is envisaged that additional work will also consider the assessment of habitat condition, quantification of particular habitat types and habitat fragmentation at different scales. The project work will be particularly focused at management objectives and challenges encountered by conservation organisations in the UK including the RSPB.

The student will have ownership of the project delivery, with the opportunity to develop methodologies and approaches throughout the project duration. Support will be provided, where necessary, to assist the student and support professional and personal development. The project will require the implementation of machine learning techniques to classify different land-cover and habitat types across a range of different spatial scales and environments. Additional tasks will also include the application of a variety of geospatial tools and software to conduct further analysis. The student will receive training, support and advice to assist in the development of these skills.

### **Applicant Specification:**

#### **Currently Studying:**

- Ecology, Conservation, Environmental Science, Biology, Geography, Natural Sciences (with an interest in remote sensing)  
OR

- Mathematics, Physics, Computer Science (with an interest in environmental applications)

**Minimum Requirements:**

- Understanding of Remote Sensing Fundamentals
- Understanding/Experience of working with Geospatial Data

**Preferred Additional Requirements:**

- Experience of using remote sensing or GIS software (e.g. ENVI, ERDAS Imagine, ArcGIS, QGIS)
- Basic programming experience (Python, R or IDL)

**Further details:**

Telephone/Skype interviews for the role will take place on Monday 15 April.

8 weeks minimum fixed term contract to be agreed with successful candidate but nominally with a start date around 17<sup>th</sup> June, 2019 to attend the SPIN Induction day at the Satellite Applications Catapult, and completion before 20<sup>th</sup> September for the Showcase the following week. Salary is £1,500 per calendar month gross.

**Closing Date for Applications: 5pm on Thursday 28 March**

Applications should be made through the online form attaching a CV, before the closing date. Please note that elements of the form left incomplete will be deemed to render the application ineligible. They will be checked for eligibility and forwarded to the employer.